

ABSTRACT

FLUID SENSOR AND METHODS

A fluid sensor for use in an environment having an ambient temperature has a
5 field-effect transistor (FET) comprising a functionalized semiconductor nano-
wire, an integral heater disposed proximate to the field-effect transistor to heat
the field-effect transistor to an elevated temperature relative to the ambient
temperature, and integral thermal insulation disposed to maintain the field-effect
transistor at the elevated temperature.